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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO.          | CONFIRMATION NO.       |
|--|-------------|-----------------------|------------------------------|------------------------|
| 09/858,397   | 05/16/2001  | Frank Randolph Bryant | 92-C-074D3<br>(STM101-00024) | 4170                   |
| 30425 7590 02/08/2008<br>STMICROELECTRONICS, INC.<br>MAIL STATION 2346<br>1310 ELECTRONICS DRIVE<br>CARROLLTON, TX 75006 |             |                       | EXAMINER<br>DUONG, KHANH B   |                        |
|  |             |                       | ART UNIT<br>2822             | PAPER NUMBER           |
|  |             |                       | MAIL DATE<br>02/08/2008      | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/858,397 | <b>Applicant(s)</b><br>BRYANT, FRANK RANDOLPH |  |
|                              | <b>Examiner</b><br>KHANH B. DUONG    | <b>Art Unit</b><br>2822                       |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 November 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-23,25,46-49 and 51-59 is/are pending in the application.
- 4a) Of the above claim(s) 17-23,25,58 and 59 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 46-49 and 51-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner. .  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **Response to Amendment**

This office action is in response to the amendment filed November 2, 2007.

Accordingly, claim 46 was amended.

Claims 1-16, 24, 26-45 and 50 were previously canceled.

Claims 17-23, 25, 58 and 59 remain withdrawn from consideration as being directed to a non-elected invention.

Currently, claims 46-49 and 51-57 remain active.

### ***Response to Arguments***

Applicant's arguments, see pages 9 to 10 of the amendment, filed November 2, 2007, with respect to the IBM TDB have been fully considered and are persuasive. The rejection of claims 46-49 and 51-57 has been withdrawn. However, the amended claims have been further rejected as follows.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 46-49 and 51-57 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Re claim 46, lines 10-12, the claim recites "the uplift caused by reoxidation of the polysilicon layer within the gate structure to increase an electric field during operation at the peripheral edge". However, such recitation is inconsistent with the description as

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provided in the instant specification which states: "Nitride layer 20 prevents oxidation of the bottom side of the polysilicon layer 22 and prevents formation of geometries which result in increased electric fields" [see paragraph 0025]. Thus, it can be understood that the purpose of the invention is to prevent, not to achieve, an increase in electric fields during the reoxidation step. Furthermore, it is respectfully submitted that the instant FIGs. 6-8 expressly shows the uplift 20a is caused by reoxidation of oxide layer 16 and substrate 12, not the polysilicon layer 22 [see paragraph 0023].

\*\*\* Other claims are rejected as depending on the rejected base claim.

#### ***Allowable Subject Matter***

Claims 46-49 and 51-57 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

#### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fukuda et al. (U.S. 5,254,867) teaches a similar integrated circuit device having a nitride layer on and directly contacting a gate oxide layer.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

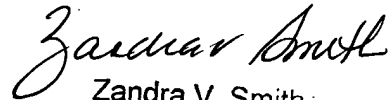
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHANH B. DUONG whose telephone number is (571) 272-1836. The examiner can normally be reached on Monday-Friday from 8:00-4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith, can be reached on (571) 272-2429. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
KBD

  
Zandra V. Smith  
Supervisory Patent Examiner  
4 Feb 2009